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EXAMINER
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TRAN, ELLEN C

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/936,570

Applicant(s)

SORIMACHI ET AL.

Examiner

Ellen C. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/05, 6/04, 11/01</u> . | 6) <input type="checkbox"/> Other: _____  |

*AT*

***DETAILED ACTION***

1. This action is responsive to communication: application filed 06 December 2001 with continuing data of a PCT filed on 22 December 2000 and a foreign application filed on 14 January 2000.
2. Claims 1-50 are currently pending in this application. Claim 1, 5, 7, 8, 10, 11, 15, 17, 18, 20, 21, 23, 24, 26, 27, 29, 30, 31, 32, 45, 46, 47, and 48 are independent claims.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language

4. **Claims 1-7, 11-17, 21-23, 27-29, 33, 35, 37, 39, and 41-44,** are rejected under 35 U.S.C. 102(e) as being anticipated by Markham U.S. Patent No. 5,796,836 (hereinafter '836).

**As to independent claim 21, “An encrypting apparatus encrypting plaintext data M including plaintext block data M, (i = 1, 2, 3, ...) and plaintext data N including plaintext, block data N, (j = 1, 2, 3, ...), the encrypting apparatus comprising:”** is taught in '836 col. 3, lines 35-67;

**“a mechanism for receiving a request to encrypt the plaintext data N1 during encrypting process of the plaintext data M before completion of the encrypting process of the plaintext data M”** is shown in ‘836 col. 7, lines 21-29;

**“an encrypting module for outputting encrypted data as module output block data  $T_1$ ”** is disclosed in ‘836 col. 7, lines 7-12;

**“a feedback loop for feeding back the module output block data T, output from the encrypting module to the encrypting module through a feedback line”** is taught in ‘836 col. 7, lines 13-20;

**“a memory, provided in parallel with the feedback line of the feedback loop for receiving the request to encrypt, the plaintext data N, and storing the module output block data T, fed back when the plaintext block data  $M_i$  is not encrypted subsequent to the plaintext block data  $M_i$  so that an encrypting process of any plaintext block data of the plaintext data N is started; and”** is shown in ‘836 col. 8, lines 14-67;

**“a selector for selecting and supplying the module output block data  $T_i$ , fed back through the feedback line of the feed back loop to the feedback loop in case that the plaintext block data  $M_{i+1}$ , is encrypted subsequent to the plaintext block data  $T_i$  and for selecting and supplying the module output block  $T_i$ , stored in the memory to the feedback loop in case that the plaintext block data  $M_{i+1}$  is not encrypted subsequent to the plaintext block data  $M_i$  and the plaintext block data  $M_{i+1}$  is encrypted after any of plaintext block data of the plaintext data N is encrypted”** is disclosed in ‘836 col. 12, lines 1-67.

As to dependent claim 22, **“wherein the memory includes: plural registers corresponding to plural pieces of plaintext data”** is taught in ‘836 col. 13, lines 1-8;

**“and a switch switching registers corresponding to the plaintext data to be encrypted”** is shown in ‘836 col. 8, lines 17-58.

**As to independent claim 5**, this claim contains substantially similar subject matter as independent claim 21; therefore it is rejected along the same rationale.

**As to dependent claim 6**, this claim contains substantially similar subject matter as claim 22; therefore it is rejected along the same rationale.

**As to independent claim 23**, **“An encrypting method comprising the steps of: encrypting plaintext block data  $M_i$  ( $i = 1, 2, 3, \dots$ ) of first plaintext data  $M$  using ciphertext block data  $T_i$  ( $i = 1, 2, 3, \dots$ ) output from an encrypting module”** is taught in ‘836 col. 7, lines 13-20;

**“storing ciphertext block data  $T_i$  to be used for encrypting plaintext block data  $M_{i+1}$  of the first plaintext data  $M$  in a memory during or after encrypting process; of the plaintext block data  $M_i$ ”** is shown in ‘836 col. 8, lines 14-67;

**“encrypting at least one plaintext block data of second plaintext data  $N$  after storing the ciphertext block data  $T_i$  to be used for encrypting the plaintext block data  $M_{i+1}$  in the memory”** is disclosed in ‘836 col. 12, lines 1-67;

**“and inputting the module output block data  $T_i$  to be used for encrypting the plaintext block data  $M_{i+1}$  stored in the memory after encrypting the at least one plaintext block data of the second plaintext data  $N$  and encrypting the plaintext block data  $M_i$  of the first plaintext data  $M$  using the encrypting module”** is taught in ‘836 col. 7, lines 21-38.

**As to independent claim 7**, this claim contains substantially similar subject matter as independent claim 23; therefore it is rejected along the same rationale.

As to independent claim 1, “”An encrypting apparatus encrypting first processing data and second processing data comprising: a memory for storing status of encrypting process” is taught in ‘836 col. 3, lines 35-67;

“wherein the encrypting apparatus starts encrypting process of the second processing *data* before encrypting process of *the first* processing data is completed, the encrypting apparatus makes the memory store the status of encrypting process of the first processing data when the encrypting apparatus starts encrypting process of the second processing data, the encrypting apparatus returns the status of the encrypting process of the encrypting apparatus to the status of the encrypting process of the first processing data stored in tile memory when the encrypting apparatus restarts encrypting the first processing data, and the encrypting apparatus restarts encrypting process of the first processing data” is shown in ‘836 col. 7, lines 13-37.

As to dependent claim 2, “wherein the encrypting apparatus restarts encrypting process of the first processing data before encrypting process of the second processing data is completed, the memory stores the status of encrypting process of the second processing data when the encrypting apparatus *restarts* encrypting process of the first processing data, the encrypting apparatus returns the status of the encrypting process of the encrypting *apparatus* to the status of the encrypting process of the second processing data stored in the memory when the encrypting apparatus restarts encrypting process of the second processing data, and the encrypting apparatus restarts encrypting process of the second processing data” is disclosed in ‘836 col. 12, lines 1-67.

As to dependent claim 3, “wherein the first processing data is first plaintext data and the second processing data is second plaintext data” is taught in ‘836 col. 7, lines 21-37.

As to dependent claim 4, “the encrypting apparatus starts encrypting process of the second processing data by an interrupt” is shown in ‘836, col. 12, line 59 through col. 13, line 9.

As to dependent claim 41, “wherein the encrypting process is performed using block cipher algorithm” is disclosed in ‘836 col. 5, lines 25-35.

As to dependent claim 43, “wherein the memory stores an intermediate encrypting result of the first processing data and an encryption key to be used for encrypting the first processing data as the status of the encrypting process” is taught in “‘836, col. 12, line 59 through col. 13, line 9.

As to independent claim 11, “A decrypting apparatus decrypting first processing data and second processing data comprising a memory for storing a status of a decrypting process” is taught in ‘836 col. 3, lines 35-67 and ‘836 col. 9, lines 30-33;

“and wherein the decrypting apparatus starts the decrypting process of the second processing data before the decrypting process of the first processing data is completed, the decrypting apparatus makes the memory store the status of the decrypting process of the first processing data when the decrypting process of the second processing data is started, and the decrypting apparatus returns the status of the decrypting process of the decrypting apparatus to the status of the decrypting process of the first processing data stored in the memory when the decrypting process of the first processing data is restarted, and the

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decrypting apparatus restarts the decrypting process of the first processing data” is shown in ‘836 col. 7, lines 13-37.

As to dependent claims 12-14, 42, and 44, these claims contain substantially similar subject matter as claims 2-4, 41, and 43; therefore they are rejected along similar rationale.

As to independent claim 15, “A decrypting apparatus decrypting ciphertext block data  $C_i$  ( $i = 1, 2, 3, \dots$ ) included in ciphertext data  $C$  and ciphertext block data  $D_j$  ( $j = 1, 2, 3, \dots$ ) included in ciphertext data  $D$ , the decrypting apparatus comprising” is taught in ‘836 col. 3, lines 35-67 and col. 9, lines 30-33;

“a mechanism for receiving a request to decrypt the ciphertext data  $D$  at an arbitrary timing during a decrypting process of the ciphertext data  $C$ ; is shown in ‘836 col. 7, lines 21-29;

“a decrypting unit for performing the decrypting process of the ciphertext block data  $C_i$ , to output plaintext block data  $M_i$ ” is disclosed in ‘836 col. 7, lines 7-12;

“a feedback loop for feeding back the ciphertext block data  $C_i$  to be used for decrypting ciphertext block data  $C_{i+1}$  to the decrypting unit through feedback line” is taught in ‘836 col. 7, lines 13-20;

“a memory, provided in parallel with the feedback line of the feedback loop, for receiving the request to decrypt the ciphertext data  $D$  and storing the ciphertext block data  $C_i$  fed back when the ciphertext block data  $C_{i+1}$  is not decrypted subsequent to the ciphertext block data  $C_i$  so that the decrypting; process of any of ciphertext block data of the ciphertext data  $D$  is started; and” is shown in ‘836 col. 8, lines 14-67;



“a selector for selecting and supplying the ciphertext block data  $C_i$  fed back from the feedback line of the feedback loop in case that the ciphertext block data  $C_{i+1}$  is decrypted subsequent to the ciphertext block data  $C_i$  and for selecting, and ,supplying the ciphertext block data  $C_i$  stored in the memory in case that the ciphertext block data  $C_{i+1}$  is not decrypted subsequent to the ciphertext block data  $C_i$  and the ciphertext block data  $C_{i+1}$  is decrypted after any of the ciphertext block data of the ciphertext data  $D$  is decrypted” is disclosed in ‘836 col. 12, lines 1-67.

As to dependent claim 16, this claim is substantially similar to dependent claim 22; therefore it is rejected along the same rationale.

As to independent claim 17, “A decrypting method comprising the steps of: decrypting plaintext block data  $C_i$  ( $i = 1, 2, 3, \dots$ ) of first plaintext data  $C$  using a decrypting module” is taught in ‘836 col. 7, lines 13-20 and ‘836 col. 9, lines 30-33;

“storing ciphertext block data  $C_i$  to be used for decrypting plaintext block data  $C_{i+1}$  of the first plaintext data  $M$  in a memory during or after decrypting process; of the plaintext block data  $C_i$ ” is shown in ‘836 col. 8, lines 14-67;

“decrypting at least one plaintext block data of second plaintext data  $D$  after storing the ciphertext block data  $C_i$  to be used for decrypting the plaintext block data  $C_{i+1}$ ” is disclosed in ‘836 col. 12, lines 1-67;

“and inputting the ciphertext block data  $C_i$  to be used for decrypting the ciphertext block data  $C_{i+1}$  stored in the memory after decrypting the at least one ciphertext block data of the ciphertext block data of the ciphertext data  $D$  and decrypting the ciphertext

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block data  $C_{i+1}$  of the first ciphertext data  $C$  using the decrypting module” is taught in ‘836 col. 7, lines 21-38.

As to independent claim 29, “A decrypting method comprising steps of: decrypting ciphertext block data  $C_i$  ( $i = 1, 2, 3, \dots$ ) of first ciphertext *data C using module* output block data  $T_i$  ( $i = 1, 2, 3, \dots$ ) output from a decrypting module” is taught in ‘836 col. 7, lines 13-20 and ‘836 col. 9, lines 30-33;

“storing nodule output block data  $T_i$  to be used for decrypting ciphertext block data  $C_{i+1}$  of the first ciphertext data  $G$  in a memory during or after a decrypting process of the ciphertext block *data C<sub>i</sub>*” is shown in ‘836 col. 8, lines 14-67;

“decrypting, at least one ciphertext block data of second ciphertext data  $D$  after storing the module output block data  $T_i$  to be used for decrypting the ciphertext block data  $C_{i+1}$  in the memory; and” is disclosed in ‘836 col. 12, lines 1-67;

“decrypting the ciphertext block data  $C_{i+1}$  of the first ciphertext data  $C$  using the decrypting module by inputting the module output. block data  $T_i$  to be used for the ciphertext block data  $C_{i+1}$  stored in the memory after decrypting the at least one ciphertext block data of the second ciphertext data  $D$ ” is taught in ‘836 col. 7, lines 21-38.

As to independent claim 27, this claim is directed to the apparatus of the method of claim 29; therefore it is rejected along the same rationale.

As to dependent claim 28, “ wherein the memory includes: plural registers corresponding to plural ciphertext data” is taught in ‘836 col. 13, lines 1-8;

“and a switch for switching the plural registers corresponding to the ciphertext data to be decrypted” is shown in ‘836 col. 8, lines 17-58.

As to **dependent claims 33, 35, 37, and 39**, these claims are directed to a computer readable medium of the previously identified claims; therefore they are rejected along the same rationale.

5. **Claims 45-50**, are rejected under 35 U.S.C. 102(e) as being anticipated by Jakubowski et al. U.S. Patent No. 6,226,742 (hereinafter '742).

As to independent claim 47, **"An encrypting method comprising: an encrypting step for inputting data to encrypt and outputting encrypted data"** is taught in '742 col. 5, lines 51-65;

**"and a MAC generating step for inputting the encrypted data output from the encrypting step and generating a MAC for ensuring an integrity of the encrypted data"** is shown in '742 col. 9, lines 34-59;

**"and wherein the MAC generating step starts generating the MAC before completion of encrypting the data by the encrypting step"** is disclosed in '742 col. 9, lines 4-33.

As to independent claim 48, **"A decrypting method comprising: a decrypting step for inputting data to decrypt and outputting decrypted data"** is taught in '742 col. 5, line 66 through col. 6, line 13;

**"and a MAC generating step for inputting the decrypted data output from the decrypting step and generating a MAC for ensuring an integrity of the encrypted data"** is shown in '742 col. 9, lines 34-59;

**"and wherein the MAC generating step starts generating the MAC before completion of decrypting the data by the decrypting step"** is disclosed in '742 col. 9, lines 4-33.

As to dependent claim 49, “A computer readable storage medium storing a program for having a computer execute steps for the encrypting method described in claim 47” is taught in ‘742 col. 8, lines 63-67.

As to dependent claim 50, “A computer readable storage medium storing a program for having a computer execute steps for the decrypting method described in claim 48” is shown in ‘742 col. 8, lines 63-67.

As to independent claim 45, this claim is directed to the apparatus of claim 47; therefore it is rejected along the same rationale.

As to independent claim 46, this claim is directed to the apparatus of claim 48; therefore it is rejected along the same rationale.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8-10, 18-20, 24-26, 30-32, 34,36,38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markham U.S. Patent No. 5,796,836 (hereinafter ‘836) in further view of Jakubowski et al. U.S. Patent No. 6,226,742 (hereinafter ‘742).

As to dependent claim 10, “An encrypting method for encrypting plaintext, data including at least one plaintext block data into ciphertext data using an encrypting unit” is

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taught in '836 col. 3, lines 35-67 "The present invention provides a system and method for decoupling encrypting of one plain text block from the encryption of the next plain text block"

**"an encrypting step, including a first feedback step for feeding back ciphertext block data  $C_i$  output from the encrypting unit when the encrypting unit encrypts plaintext block data, inputting the plaintext block data, performing an encrypting process by feeding back the ciphertext block data  $C_i$  through a first feedback loop, and outputting a ciphertext block data"** is shown in '836 col. 7, lines 7-20 "As an example, consider the cipher feedback mode embodiment shown in FIG. 4. The mode shown uses three encryption device modules 52.1-3. Each encryption device module 52 includes a codebook module 32, an output register 54, and an encryption module";

the following is not taught in '836:

**"and generating a message authentication code (MAC) to ensure an integrity of the ciphertext data, the encrypting method comprising:"** however '746 teaches "The encrypted MAC is advantageously extended throughout the remainder of the ciphertext message. The encrypted MAC is then inserted into the ciphertext message as block  $n-1$  and  $n$ " in col. 9, lines 51-65;

**"a MAC generating step, including a second feedback step for feeding back a computed intermediate MAC result, inputting the ciphertext block data whenever the ciphertext block data is output from the encrypting step, processing data"** however '746 teaches "Illustratively, two blocks in the intermediate bit stream, i.e.,  $Y_{n-1}$  and  $Y_n$  are concatenated together to form a 54-bit MAC ( $Y_{n-1}$ ,  $Y_n$ ) .... By chaining a plaintext message and

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defining the MAC as a predefined portion, e.g.,  $(Y_{n-1}, Y_n)$  of the ensuing chained message, the MAC can be generated rather quickly and efficiently” in col. 9, lines 34-59;

**“feeding back the computed intermediate MAC result through the second feedback step, and generating the MAC to ensure the integrity of the ciphertext data”** however ‘742 teaches “Through our present invention, a plaintext message can be securely encrypted and any violations of the integrity of a resulting ciphertext message can readily be detected by, during encryption generating, in response to an incoming plaintext message, and intermediate stream, wherein a predefined portion of the intermediate stream defines a message authentication code (MAC)” in col. 9, lines 4-33.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of ‘836, a cipher block chaining mechanism for encryption and decryption to enhance the security of messages exchange. One of ordinary skill in the art would have been motivated to perform such a modification because of the growth in the Internet and technology (see ‘742 col. 3, lines 24 et seq.). “Therefore, a need exists in the art for a cryptographic technique that not only provides an extremely high level of security against cryptanalysis, particularly given the sophistication and power of current and future processing technology, but also is capable of detecting a change made to a ciphertext message”.

**As to independent claim 8**, this claim is directed to the apparatus of the method of claim 10; therefore it is rejected along the same rationale.

**As to dependent claim 9**, “wherein the encrypting unit and the MAC generator perform alternately the encrypting process and a MAC generating process by sharing one encrypting module and one feedback loop, and wherein the one feedback loop includes a

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memory for respectively storing and outputting results of the encrypting process and the MAC generating process; and a selector for selecting alternately the results of the encrypting process and the MAC generating process from the memory to alternately perform the encrypting process kind the MAC generating process” is taught in ‘742 col. 14, lines 1-27 “FIG. 5 depicts a flowchart of Encryption procedure 500. Upon entry to this procedure, block 510 is first executed to calculate the value of a zero-th output block of intermediate stream,  $Y$ , as being equal to  $F(eP_0)$  and a block counter,  $i$ , to the value one. Thereafter, execution enters Encryption--Forward CBC procedure 520 which, given the plaintext as input, computes the intermediate bit stream through a forward cipher block chain. In particular, execution first proceeds to block 525 which determines for block  $i$  in the plaintext stream, i.e.,  $P_i$ , and block  $i-1$  in the intermediate stream, i.e.,  $Y_{i-1}$ , the value of block  $i$  in the intermediate stream,  $Y_i$ , depending on whether the value of counter  $i$  is then even or odd, through the use of equation (4) or (5) above, respectively. Once the value of block  $Y_i$  is so determined, execution proceeds to decision block 530. This decision block determines if all  $n+1$  blocks in the intermediate bit stream have been generated. If any such block remains to be calculated, then decision block 530 routes execution, via NO path 534, to block 535. The latter block increments the block counter by one. Execution then loops back, via path 537, to block 525 to generate the value of the next block in the intermediate stream, and so forth. Alternatively, if all such blocks have been generated, then decision block 530 routes execution, via YES path 532, out of procedure 520 and to block 540”.

As to independent claim 20, **“A decrypting method decrypting ciphertext data including at least one ciphertext block data into plaintext data”** taught in ‘836 col. 3, lines 35-67

**“and generating a message authentication code (MAC) for ensuring an integrity of the ciphertext data”** in col. 9, lines 51-65;

**“the decrypting method comprising: a decrypting step including a first feedback step for feeding back module output block data T, generated at decrypting data by a decrypting module, inputting the ciphertext block data, decrypting the ciphertext block data using the module output block data T, fed back through the first feedback loop, and outputting plaintext block data”** is shown in ‘836 col. 7, lines 7-20

**“a MAC generating step including a second feedback step for feeding back a computed intermediate MAC result, inputting ciphertext block data identical to the ciphertext block data input to the decrypting unit, processing the darn, outputting the computed intermediate MAC result”** is disclosed in ‘742 col. 9, lines 34-59;

**“feeding back the computed intermediate MAC result by the second feedback loop, and generating the MAC for ensuring the integrity of ciphertext data”** is taught in ‘742 col. 9, lines 4-33.

As to independent claim 18, this claim is directed to the apparatus of the method of claim 20; therefore it is rejected along the same rationale.

As to dependent claim 19, **“wherein the decrypting unit and the MAC generator share one decrypting module and one feedback loop and alternately perform a**



decrypting process and a MAC generating process, and wherein the one feedback loop includes: a memory storing and outputting results of the decrypting process and the MAC generating process; and a selector for alternately selecting the results of the decrypting process and the MAC generating process to output to the decrypting module for alternately performing the decrypting process and the MAC generating process” is taught in ‘742 col. 15, lines 15-42 “FIGS. 7A and 7B collectively depict a flowchart of Decryption procedure 700; the correct alignment of the drawing sheets for these figures is shown in FIG. 7. Upon entry to this procedure, block 705 is first executed to decrypt the encrypted MAC, i.e.,  $(Y_{n-1}', Y_n')$ , residing in the two highest-order blocks, i.e.,  $C_{n-1}$  and  $C_n$ , of incoming ciphertext message C. The decryption algorithm used is an inverse pseudo-random permutation of that which created the encrypted MAC”.

As to independent claim 24, this claim is directed to the apparatus of the method of claim 10; therefore it is rejected along similar rationale.

As to dependent claim 25, this claim contains substantially similar subject matter as claim 9; therefore it is rejected along the same rationale.

As to independent claim 26, this claim contains substantially similar subject matter as claim 10; therefore it is rejected along the same rationale.

As to independent claim 30, this claim is directed to the apparatus of the method of claim 20; therefore it is rejected along similar rationale.

As to dependent claim 31, this claim contains substantially similar subject matter as claim 19; therefore it is rejected along the same rationale.

**As to independent claim 32**, this claim contains substantially similar subject matter as claim 20; therefore it is rejected along the same rationale.

**As to dependent claims 34, 36, 37, and 40**, these claims are directed to a computer readable medium of the previously identified claims; therefore they are rejected along the same rationale.

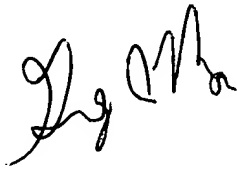
***Conclusion***

8 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen C Tran whose telephone number is (571) 272-3842. The examiner can normally be reached from 6:00 am to 2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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28 September 2005



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